

Examiner's Copy

AN 1981-81348D [44] WPIDS
TI Preventing fatigue crack formation in dies - by leaving oversize bead at sensitive point and punching to size.

DC M24

IN DOVNAR, S A

PA (ABPH-R) AS BELO PHYS ENG

CYC 1

PI SU 802383 B 19810216 (198144)* 4p <--

PRAI SU 1979-2725893 19790216

AB SU 802383 B UPAB: 19930915

The operating life of dies is lengthened by preheating, induction heating of fatigue crack formation zones to a temp. 50-100 deg.C. above Ac3, through heating to quenching temp., cooling, quenching and tempering. Before preheating (during turning), a projecting bead is left in the fatigue crack formation zones, projecting above the surface to a height corresponding to the depth of fatigue crack formation. The bead (3) is forced into the body of the die (1) by a master punch (4) during the cooling operation.